CLAIMS

1. (Currently Amended) A method of compiling formatted video content into a binary format, comprising:

receiving a formatted video content, the formatted video content comprising Extensible Hypertext Markup Language (XHTML) with Cascading Style Sheets (CSS), the formatted video content including a plurality of display objects, each display object having one or more conditions; and

processing the ~~a~~ formatted video content ~~containing textual words~~ with a process that is specific to the format of the video content by pre-cascading the CSS with the XHTML to generate one or more rendering-style records for each of the one or more conditions of each display object, wherein one or more types of interactive input can be the one or more conditions upon which the rendering-style record for each display object is generated ~~and a process that is specific to a predetermined client, the formatted video content including:~~

~~Cascading Style Sheets (CSS) that select an element of the formatted video content by a pseudo-class, and~~

~~a localization dictionary to translate a portion of the textual words of the formatted video content into a plurality of languages~~.

2. (Canceled).

3. (Previously Presented) The method as defined in Claim 1, wherein:

the formatted video content includes source content in one or more formats selected from a group consisting of an original markup language, a word processing document format, a spreadsheet format, a slideshow format, a database format, a drawing format, and an electronic mail (email) format.

4. (Currently Amended) The method as defined in Claim 1, further comprising:

translating the video content in the binary format with a document object model into a document object model hierarchy corresponding to the video content[[]];

gathering each different style of translated video content based on different pseudo-class selectors; and

presenting the gathered video content at the predetermined client using the document object model hierarchy.

5. (Currently Amended) The method as defined in Claim 4, wherein the formatted video content includes an original markup language, wherein the presenting the gathered video content includes presenting the layout, rendering, UI interaction, and dynamic aspects of the video content from the original markup language, and wherein the presented gathered video content includes form elements, scrolling, navigation, and event handling defined in the video content from the original markup language.

6. (Previously Presented) The method as defined in Claim 4, wherein the presenting further comprises reflowing inline elements within a shape consistent with a predetermined display resolution and size.

7. (Canceled).

8. (Currently Amended) The method as defined in Claim 1, wherein the processing the formatted video content with a client-specific routine to convert the formatted video content to binary data includes applying styling nodes to each of the elements of the formatted video content, wherein the elements of the formatted video content which have similar styling are applied to the same styling node~~further comprising converting the format of the non-textual video content into one or more alternative non-textual formats~~.

9. (Canceled).

10. (Currently Amended) A computer storage medium storing instructions that when executed cause one or more processors to:

receiving a formatted video content, the formatted video content comprising Extensible Hypertext Markup Language (XHTML) with Cascading Style Sheets (CSS), the formatted video content including a plurality of display objects, each display object having one or more conditions;

pre-cascade the CSS with the XHTML, via a first routine specific to the format of the video content, to generate one or more rendering-style records for each of the one or more conditions of each display object, wherein one or more types of interactive input can be the one or more conditions upon which the rendering-style record for each display object is generated;

~~capture a presentation result of processed video content, the video content includes a localization dictionary to translate one or more textual words of the video content into a plurality of languages, wherein the presentation includes layout, rendering, UI interaction, and dynamic aspects of the video content, and wherein the capture comprises processing the video content with a routine that is specific to the format of the video content~~

compile the processed video content with a second routine, wherein the second routine is ~~and~~ a client-specific routine specific to a predetermined client, the client-specific routine ~~; and~~ to create one or more serialized binary bit streams corresponding to the ~~presentation result~~video content, wherein the serialized binary bit streams preserves the user interface interaction elements of the video content~~facilitates visual rendering and end-user interaction with the serialized binary bit streams through a user interface~~; and

transmit, via a head-end in a transmission over a satellite/Cable TV (CATV) network, the one or more serialized binary bit streams to the predetermined client.

11. (Canceled).

12. (Currently Amended) The computer storage medium as defined in Claim 10, wherein the instructions, when executed cause the one or more processors to further:

translate the one or more serialized binary bit streams ~~with a document object model~~ into a document object model hierarchy corresponding to the video content; and

present the translated video content using the document object model hierarchy.

13. (Currently Amended) The computer storage medium as defined in Claim 12, wherein the present the translated video content includes presenting~~: the instruction to present includes maintaining the layout, rendering, UI interaction, and dynamic aspects of the video content ; and~~

~~the presented translated video content includes~~ form elements, scrolling, navigation, and event handling defined in the video content .

14. (Currently Amended) The computer storage medium as defined in Claim 13, wherein:

the video content includes inline images and a shape within which the inline images is to be placed during the presenting; and

the present the translated video content includes~~presenting further comprises~~ reflowing the text within the shape consistent with a predetermined display resolution and size.

15. (Previously Presented) The computer storage medium as defined in Claim 10, wherein the video content is in an original markup language comprising XHTML+CSS.

16. (Canceled).

17. (Withdrawn) A method comprising:

receiving video content at a front end, the video content including XHTML and CSS;

pre-cascading the CSS using a CSS parser with the XHTML to generate a rendering-style record for each of a plurality of conditions that each of a plurality of display objects in the video content have for various interactive input;

forming a hierarchical tree of nodes, wherein the pre-cascading of the CSS provides a presentation for the hierarchical tree of nodes and the XHTML provides a structure for the hierarchical tree of nodes, wherein each said node is referenced to a corresponding said rendering-style record;

compiling the hierarchical tree of nodes into serialized binary data that includes, for each said node, information corresponding to the hierarchy and rendering-style record thereof;

transmitting the serialized binary data over a network;

receiving the serialized binary data from the network;

deserializing the received serialized binary data using a DOM to represent each said node of the hierarchical tree and the respective information corresponding thereto;

calculating a layout presentation for the nodes of the hierarchical tree, including sizing and reflow of the plurality of display objects against a predetermined size of the layout presentation; and

calling one or more draw functions to output the layout presentation.

18. (Withdrawn) A server-side for a headend performing from the method of Claim 17:

the receiving of the video content;

the pre-cascading;

the forming of the hierarchical tree of nodes, wherein each said node is referenced to a corresponding said rendering-style record;

the compiling; and

the transmitting.

19. (Withdrawn) A client performing from the method of Claim 17:

the receiving of the serialized binary data;

the deserializing;

the calculating; and

the calling.

20. (Withdrawn) A server-side for a headend, comprising:

a parser to parse video content in an original markup language into a Document Object Model (DOM) tree that includes layout, rendering, UI interaction, and dynamic aspects of the video content;

a transcoder to transcode the DOM tree into video content in a serialized byte-stream that includes the layout, rendering, UI interaction, and dynamic aspects of the video content from the original markup language; and

a network interface for transmitting communications containing the serialized byte-stream.

21. (Withdrawn) The server-side for a headend as defined in Claim 20, wherein the original markup language comprises XHTML+CSS.

22. (Currently Amended) A Multiple System Operation system, comprising:

storage for video content in an original markup language that includes layout, rendering, UI interaction, and dynamic aspects of the video content,

wherein the video content includes a plurality of display objects, each display object having one or more conditions ~~localization dictionary to translate one or more textual words of the video content into a plurality of languages~~; and

one or more headends each having one or more servers, wherein each ~~said~~ server includes a compiler to compile the video content in the original markup language into video content in a binary format that includes the layout, rendering, UI interaction, and dynamic aspects of the video content from the original markup language, ~~wherein~~ the compiler ~~facilitates~~ to ~~processing~~ (1) determine a client-specific

routine specific for a predetermined client for rendering the video content in the binary format to be consistent with the original markup language, and to (2) process the video content in the original markup language with (a) a markup-specific routine that is specific to the original markup language, and (b) a the client-specific routine determined via the compiler of the server, wherein the markup-specific routine pre-cascades the original markup language to generate one or more rendering-style records for each of the one or more conditions of each display object, wherein one or more types of interactive input can be the one or more conditions upon which the rendering-style record for each display object is generated~~specific to a predetermined client for rendering the video content in the binary format so as to be consistent with the original markup language~~.

23. (Canceled).

24.(Original) The MSO as defined in Claim 22, wherein each of said headends is to broadcast on a network selected from the group consisting of:

a cable television broadcasting network;

a satellite television broadcasting network;

an air wave broadcasting television network;

a local area network;

a wide area network; and

the Internet.

25. (Original) The MSO as defined in Claim 22, wherein the original markup language comprises XHTML+CSS.

26. (Withdrawn) A client comprising:

processing hardware; and

memory including an operating system and one or more applications for execution by the processing hardware, wherein:

a decoder application which, when executed by the processing hardware, decodes video content in a binary format with a document object model into a document object model hierarchy, wherein:

the video content in the binary format includes layout, rendering, user UI interaction, and dynamic aspects of video content from an original markup language; and

the document object model hierarchy corresponds to the video content in the original markup language;

a video output said application which, when executed by the processing hardware, presents the decoded video content using the document object model hierarchy.

27. (Withdrawn) The client as defined in Claim 26, wherein:

the video content from the original markup language includes text and a shape within which the text is to be placed during the presenting; and

the presenting of the decoded video content further comprises reflowing the text within the shape consistent with a predetermined display resolution and size.

28. (Withdrawn) The client as defined in Claim 26, wherein the presenting by the video output said application includes:

the layout, rendering, UI interaction, and dynamic aspects of the video content from the original markup language; and

form elements, scrolling, navigation, and event handling defined in the video content from the original markup language.

29. (Withdrawn) The client as defined in Claim 26 and selected from the group consisting of a set top box, a personal computer, a video game console, an automatic teller machine, a cellular telephone, and a computing device for which the processor hardware has a clock speed of less than or equal to one-hundred (100) MHz and the memory is less than or equal to five (5) megabytes.

30. (Withdrawn) The client as defined in Claim 26, wherein the original markup language comprises XHTML+CSS.

31. (Withdrawn) A system comprising:

a transcoder to transcode video content in an original markup language into video content in a binary format that includes layout, rendering, UI interaction, and dynamic aspects of the video content from the original markup language;

a transport medium for transporting the video content in the binary format; and

a client to:

receive the video content in the binary format from the transport medium;

translate the video content in the binary format with a document object model into a document object model hierarchy corresponding to the video content of the original markup language; and

present the translated video content using the document object model hierarchy.

32. (Withdrawn) The system as defined in Claim 31, wherein:

the video content from the original markup language includes inline images and a shape within which the inline images are to be placed during the presenting; and

the presenting of the translated video content further comprises reflowing the inline images within the shape consistent with a predetermined display resolution and size.

33. (Withdrawn) The system as defined in Claim 31, wherein the transcoding comprises processing the video content in the original markup language with:

a markup-specific routine that is specific to the original markup language; and

a client-specific routine to specific to the client for the presenting of the translated video content in the binary format so as to be consistent with the original markup language.

34. (Withdrawn) The system as defined in Claim 31, wherein the presenting at the client includes:

the layout, rendering, UI interaction, and dynamic aspects of the video content from the original markup language; and

form elements, scrolling, navigation, and event handling defined in the video content from the original markup language.

35. (Withdrawn) The system as defined in Claim 31, wherein the transport medium comprises a network selected from the group consisting of:

a cable television broadcasting network;

a satellite television broadcasting network;

a cellular telephone network;

a terrestrial analog or digital broadcasting television network;

a local area network (LAN);

a wide area network (WAN); and

the Internet.

36. (Withdrawn) The system as defined in Claim 31, further comprising a server at a headend of an MSO, wherein the transcoder is included in the server.

37. (Withdrawn) A system comprising:

means for compiling:

from content in a complex markup language that includes dynamic layout, presentation, rendering, and user interface interaction; and

to serialized binary data that encodes the dynamic layout, presentation, rendering, and user interface interaction of the content;

client engine means, using the serialized binary data, for the dynamic layout, presentation, rendering, and user interface interaction of the content on a client.

38. (Withdrawn) The system as defined in Claim 37, wherein:

the client engine means comprises a DOM used to form a DOM hierarchy having a plurality of element; and

the plurality of elements in the DOM hierarchy have respective properties that can be used to perform the layout, rendering, and UI interaction at the client.

39. (Withdrawn) The system as defined in Claim 37, wherein the client is selected from the group consisting of a set-top box, a personal computer, a video game console, an automatic teller machine, a cellular telephone, and a computing device having processor hardware with a clock speed of less than twenty (20) MHz and having memory less than two (2) megabytes.

40. (Withdrawn) The system as defined in Claim 37, wherein the content in the complex markup language comprises XHTML+CSS.

41. (Previously Presented) The method as defined in Claim 1, wherein the pseudo-class comprises at least one of an element as a link or an input device action in association with an object that corresponds to the element.